

GEO VIRTUAL SYMPOSIUM 2020

Session: Earth Observations for COVID-19 Response and Recovery

JAXA Earth Observation Activities on COVID-19

15th June, 2020

BIO Presenter

Mr. Ochiai has experienced for more than 25 years to develop Earth observation satellite data and information system and possesses scientific and technical expertise in JAXA. He has actively advocated throughout his career the use of satellite EO data in various stakeholders in Japan and internationally.

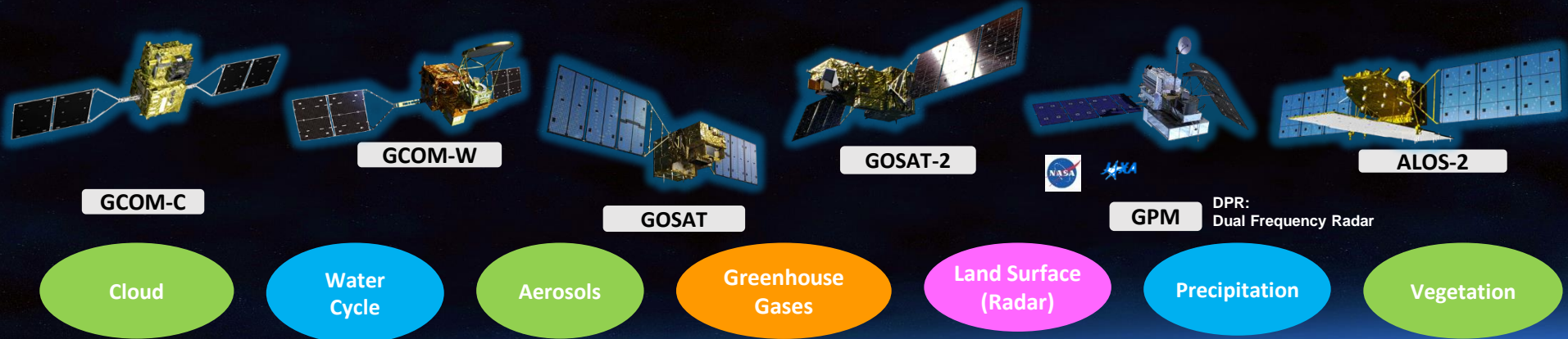
He had been seconded to GEO Secretariat totally 7years as EO Architecture and Data Expert. He served a co-chair of GEO Programme Board during 2018 and 2019. He also serves CEOS Lead role for Global Forest Observation Initiative (GFOI) as one of GEO Flagships.

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Current JAXA Earth Observation Satellites

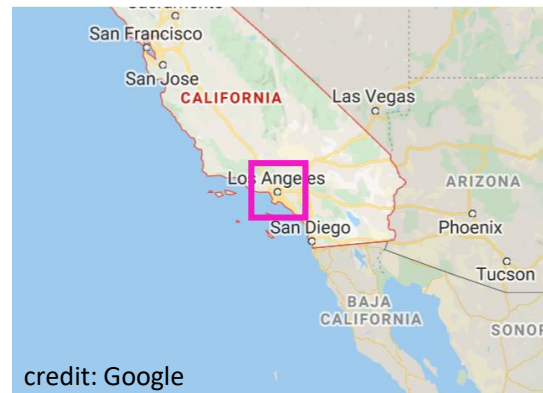
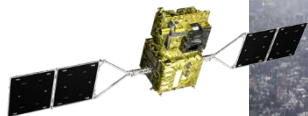


What impact of COVID-19 can be seen from space?



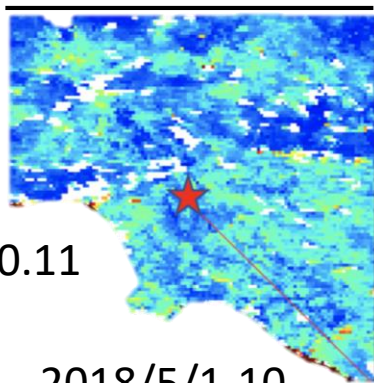
Variation in aerosol of Los Angeles

Thick ← Aerosol Optical Thickness → Thin



100 km

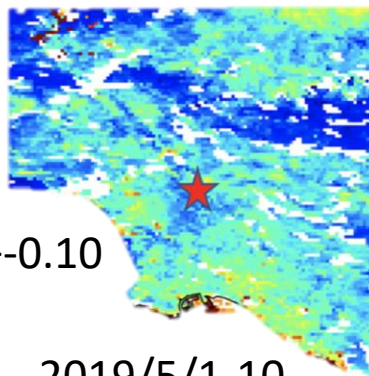
AOT
0.21+0.11



2018/5/1-10



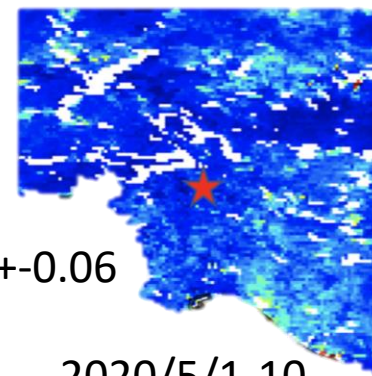
AOT
0.21+0.10



2019/5/1-10

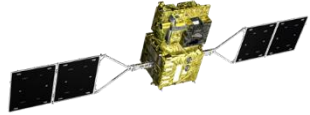


AOT
0.11+0.06

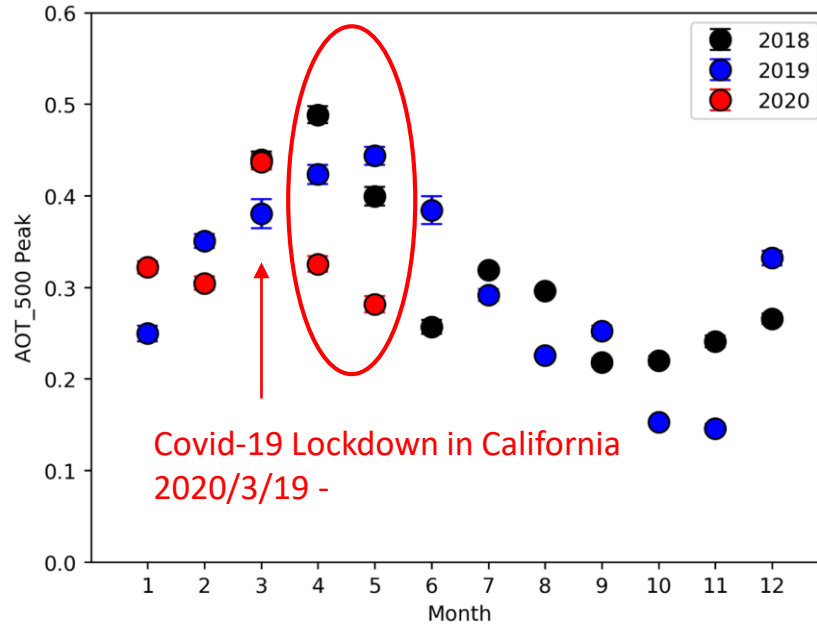


2020/5/1-10

(Average +/- Standard deviation)



(Peak AOT position +/- error, estimated by gaussian fitting)

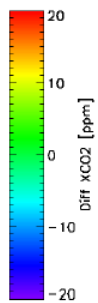
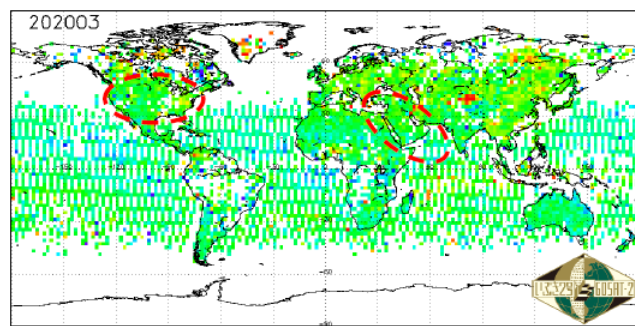
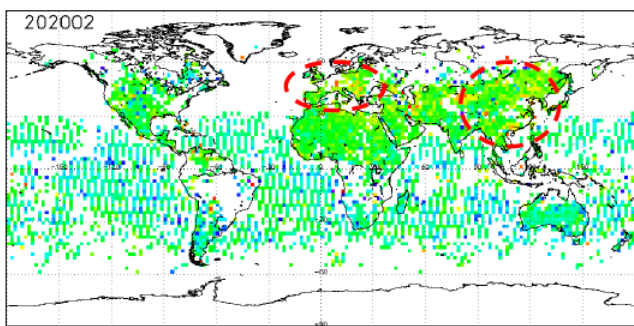
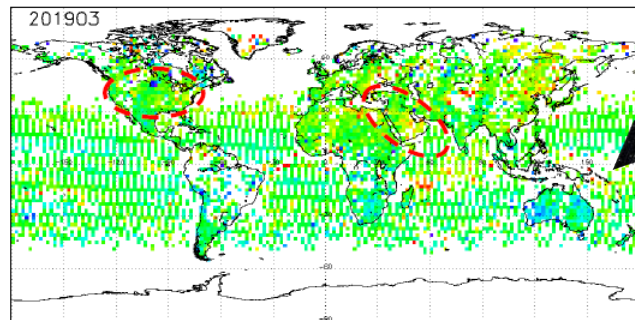
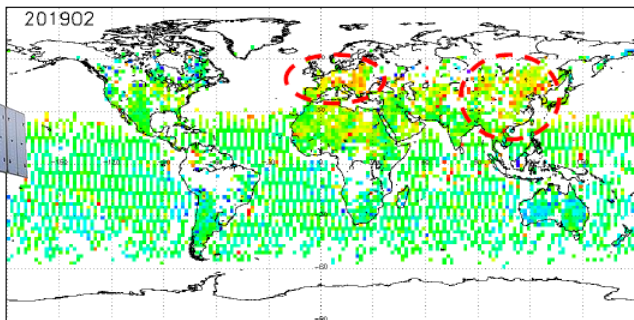


GEO may help to validate the results by sharing meteorology data and social activity (factory and traffic) data.

It is difficult to identify the origin of the changes in aerosol...

CO₂ partial column difference between LT(0-4km) and UT(4-12km)

XCO₂_low-upper



Feb2020: Less CO₂ emission in China and Europe than 2019?

Mar2020: Less CO₂ emission in US and Middle East than 2019?

May 30-31, 2020



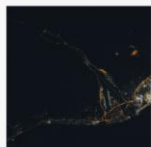
15,000 Participants from
150 countries

- NASA, ESA, JAXA, CSA and CNES invited coders, entrepreneurs, scientists, designers, storytellers, makers, builders, artists, and technologists to participate in a virtual hackathon May 29-31 dedicated to putting open data to work in developing solutions to issues related to the COVID-19 outbreak.
- JAXA provides earth observation data to the hackathon. <https://www.nasa.gov/press-release/nasa-partners-launch-virtual-hackathon-to-develop-covid-19-solutions>

Challenges



Quiet Planet



Light the Path



Where There's a Link,
There's a Way



A New Perspective



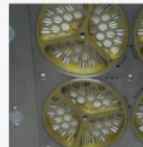
The Art of It All



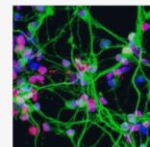
SDGs and COVID-19



Food for Thought



Purify the Air Supply



Human Factors



The Isolation Solution



A World Away



An Integrated Assessment

Thank You!

Osamu Ochiai / 15th June 2020
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#EO4Impact

Collaborate and communicate with GEO:

